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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,454	08/24/2001	Kai-Yeung (Sunny) Siu	SLKN-001/01US	3653
23419 7590 05/07/2007 COOLEY GODWARD KRONISH LLP 3000 EL CAMINO REAL 5 PALO ALTO SQUARE PALO ALTO, CA 94306			EXAMINER NGUYEN, PHUONGCHAU BA	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 05/07/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/939,454	SIU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Phuongchau Ba Nguyen	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 38-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

*Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 38, 42, 47, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (5,896,380) in view of Fan (6,324,165).

Regarding claim 38, Brown (5,896,380) discloses a method of routing network traffic (a multi-stage ATM switch, fig.1), comprising:

receiving a data stream of cells at an input layer (inlet stage, fig.1), each cell of said data stream of cells including data and a header to designate a destination device (abstract, lines 3-5, see also fig.2, ATM cell with a destination field 42, sub-field 44 indicating the destination outlet stage fabric

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of the cell, and sub-field 46 indicating the destination outlet port of the destination outlet stage fabric);

routing a selected cell (i.e., A-D cells, fig.3) from said input layer (i.e., inlet stage fabric 14, fig.3) to a selected intermediate layer circuit (i.e., Queuer 64-fig.3 for outlet 3-line 3 in queuer, i.e., 64-3) within a set of intermediate layer circuits(i.e., core stage fabric 20, fig.3), said routing including routing said selected cell (i.e., A-D cells, fig.3) to a specified buffer (i.e., 64-3 for outlet 24-3) within said selected intermediate layer circuit that corresponds to said destination device (i.e., outlet 24-3, fig.3) of said selected cell (abstract, lines 3-21; also see col.6, lines 27-31), wherein the buffer (i.e., third queue 64-3) is configured to release the selected cell (i.e., A, B, C or D cell) on a continuous basis (i.e., transmitting one cell each cycle of clock, col.5, lines 48-63 and col.6, lines 44-67); and

delivering said selected cell (i.e., A, B, C or C cells) from said selected intermediate layer circuit (i.e., third queue 64-3 at core stage fabric, fig.3) to a selected output layer circuit (i.e., designated port destination at outlet stage fabric 24-3, fig.3) within a set of output layer circuits (i.e., outlet stage fabric

24-3, fig.3), said selected output layer circuit (i.e., port ii-fig.3) corresponding to said destination device of said selected cell (abstract, lines 3-21 & col.7, lines 1-15).

Brown discloses all the claimed limitations, except (1) generating a back-pressure signal representative of a status of said selected output layer circuit for providing a responsive feedback to said input layer such that said routing is responsive to said status of said selected output layer circuit.

However, in the same field of endeavor, Fan (6,324,165) discloses DRC rate feedback control for generating a rate feedback from an output port to the input port so that the input port would only send data without exceeding the minimum guaranteed rates, (column 7, line 44 to column 8, line 67, see also figure 3 and col.13, line 4-col.14, line 63), corresponding to (1). Therefore, it would have been obvious to an artisan to apply Fan's teaching to Brown's system with the motivation being to control internal congestion and to achieve fair throughput performance among competing flows at switch bottlenecks.

Regarding claim 42, Brown (5,896,380) discloses a method of routing network traffic, said method comprising:

receiving a data stream with a set of cells, each cell including data and a header to designate a destination device (col.2, lines 43-46),

assigning a selected cell of said set of cells to a selected queue of a set of queues within an input layer circuit, said selected cell specifying a selected destination device, said selected queue corresponding to said selected destination device (col.2, lines 43-46);

routing said selected cell to a selected intermediate layer circuit within a set of intermediate layer circuits, said selected intermediate layer circuit including a set of buffers (queues 64-fig.3) corresponding to a set of destination devices (col.2, lines 46-50), said selected intermediate layer circuit assigning said selected cell to a selected buffer of said set of buffers, said selected buffer corresponding to said selected destination device (col.2, lines 46-50); and

sending said selected cell as said selected cell arrives at said selected intermediate layer circuit (col.2, lines 50-55) to a selected output layer circuit

within a set of output layer circuits, said selected output layer circuit corresponding said selected destination device, said selected output layer circuit storing said selected cell prior to delivering said selected cell to an output node (col.2, lines 50-55).

Regarding claim 47, Brown discloses all the claimed limitations, except (1) generating a flow control warning signal in response to output layer congestion at said selected output layer circuit; forming a flow control header signal within a header of an incoming data cell in response to said flow control warning signal; and processing said incoming data cell through said selected intermediate layer circuit and said selected output layer circuit in accordance with said flow control header signal.

However, in the same field of endeavor, Fan (6,324,165) discloses DRC rate feedback control (flow control warning signal) for generating a rate feedback from an output port to the input port so that the input port would only send data without exceeding the minimum guaranteed rates, (column 7, line 44 to column 8; line 67, see also figure 3 and col.13, line 4-col.14, line

63), corresponding to (1). Therefore, it would have been obvious to an artisan to apply Fan's teaching to Brown's system with the motivation being to control internal congestion and to achieve fair throughput performance among competing flows at switch bottlenecks.

Regarding claim 50, Brown further discloses wherein said sending includes sending said selected data cell from said selected intermediate layer circuit without communicating timing information with other intermediate layer circuits within said set of intermediate layer circuits (col.4, lines 63-65).

3. Claims 39, 40, 44, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (5,896,380) in view of Fan (6,324,165) as applied to claim 38 above, and further in view of Lipp (6,751,219).

Regarding claims 39-40, 44-45, Brown discloses all the claimed limitations, except wherein said intermediate layer is configured to identify a multicast



demand signal in a cell and thereafter replicate said cell to produce a multicast signal.

However, in the same field of endeavor, Lipp (6,751,219) discloses wherein said intermediate layer is configured to identify a multicast demand signal in a cell and thereafter replicate said cell to produce a multicast signal (col.20, lines 26-58).

Therefore, it would have been obvious to an artisan to apply Lipp's teaching to Brown's system with the motivation being to avoid localized congestion and packet blocking.

4. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (5,896,380) in view of Fan (6,324,165) as applied to claim 42 above, and further in view of Nicols (6,473,428).

Regarding claim 43, Brown discloses all the claimed limitations, except wherein said routing is initiated when said selected queue reaches a specified cell volume level.

However, in the same field of endeavor, Nicols (6,473,428) discloses wherein said routing is initiated when said selected queue reaches a specified cell volume level (col.5, lines 24–38). Therefore, it would have been obvious to an artisan to apply Nichols's teaching to Brown's system with the motivation being to prevent overloading at buffer.

5. Claims 48–49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (5,896,380) in view of Fan (6,324,165) as applied to claim 42 above, and further in view of Pleissier (6,661,773).

Regarding claims 48–49, Brown discloses all the claimed limitations, except wherein said input layer is operative in a normal mode to deliver data cells to each of said intermediate layer circuits and is alternately operative in a fault mode to deliver cells to a subset of said intermediate layer circuits that remain operative.

However, in the same field of endeavor, Pleissier (6,661,773) discloses wherein said input layer is operative in a normal mode to deliver data cells to

each of said intermediate layer circuits and is alternately operative in a fault mode to deliver cells to a subset of said intermediate layer circuits that remain operative (col.4, lines 4-54). Therefore, it would have been obvious to an artisan to apply Pleissier's teaching to Brown's system with the motivation being to ensure data successfully delivered to respective destination nodes in the network.

6. Claims 41, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (5,896,380) in view of Fan (6,324,165) as applied to claim 38 above, and further in view of Milway (6,122,279).

Regarding claims 41 & 46, Brown discloses all the claimed limitations, except wherein said routing includes routing said selected cell to a dedicated high priority traffic intermediate layer circuit when said header specifies that said selected cell has a high priority.

However, in the same field of endeavor, Milway discloses wherein said routing includes routing said selected cell to a dedicated high priority traffic

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intermediate layer circuit when said header specifies that said selected cell has a high priority (col.17, lines 34-37). Therefore, it would have been obvious to an artisan to apply Milway's teaching to Brown's system with the motivation being to provide a service to urgent traffic in a more timely manner.

### *Response to Arguments*

7. Applicant's arguments filed 2-20-07 have been fully considered but they are not persuasive.

A/. In contrast, the present claims require no such elements. Indeed, as noted by the Specification at paragraph 0043, "Each intermediate layer circuit delivers cells to the output layer 103 as the cells arrive." Thus, comparison of Brown's method of queuing at a core stage fabric (intermediate layer) is inapposite with respect to the present claims since the present claims anticipate no such queuing.

In response to applicant's argument that "comparison of Brown's method of queuing at a core stage fabric (intermediate layer) is inapposite with respect to the present claims since the present claims anticipate no such queuing", a

recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

B/. Applicant argued that claim 38 requires a buffer, "wherein the buffer is configured to release the selected cell on a continuous basis"(amended limitation to claim 38), page 9 in the remarks.

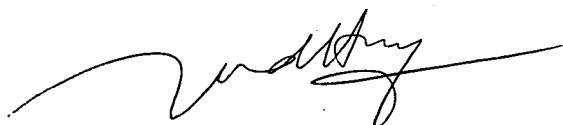
In reply, applicant's arguments with respect to claim 38 have been considered but are moot in view of the new ground(s) of rejection. Applicant is directed to figure 3 of Brown disclosing A, B, C or D cell in the third queue 64-3 (i.e., buffer) to be transmitted to the outlet stage fabric in each cycle of clock, see column 5, lines 48-63, and column 6, lines 44-67.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose


telephone number is 571-272-3148. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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